

AMENDMENTS

Please make the following amendments to the claims:

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but C17

41. (Amended) A method of increasing the proliferative capacity of a mammalian cell, comprising introducing into the cell a recombinant polynucleotide that encodes a telomerase reverse transcriptase protein, variant, or fragment having telomerase catalytic activity when complexed with a telomerase RNA,  
wherein the polynucleotide hybridizes to DNA having a sequence complementary to SEQ. ID NO:1 at 5°C to 25°C below  $T_m$  in aqueous solution at 1 M NaCl;  
wherein  $T_m$  is the melting temperature of double-stranded DNA having the sequence of SEQ. ID NO:1 under the same reaction conditions; and  
whereby introducing the recombinant polynucleotide into the cell increases the proliferative capacity of the cell

42. The method of claim 41, wherein the cell is a human cell.

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43. (Amended) The method of claim 41, further comprising selecting the cell from other cells because it expresses increased telomerase catalytic activity as a result of introducing the polynucleotide.

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44. (Amended) The method of claim 43, wherein the cell is a human cell.

45. The method of claim 41, wherein the polynucleotide encodes a full-length, naturally occurring telomerase reverse transcriptase.

46. The method of claim 45, wherein the cell is a human cell.

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47. (Amended) The method of claim 45, further comprising selecting the cell from other cells because it expresses increased telomerase catalytic activity as a result of introducing the polynucleotide.

48. The method of claim 41, wherein the polynucleotide encodes a telomerase reverse transcriptase having the amino acid sequence of SEQ ID NO:2.

49. The method of claim 48 wherein the cell is a human cell.

36 50. (Amended) The method of claim 48 further comprising selecting the cell from other cells because it expresses increased telomerase catalytic activity as a result of introducing the polynucleotide.

37 51. (Amended) The method of claim 50 wherein the cell is a human cell.

52. The method of claim 41, wherein the recombinant polynucleotide is an expression vector.

38 53. (Amended) The method of claim 52 wherein the expression vector is an SV40 virus expression vector, an EBV expression vector, a herpesvirus expression vector, or a vaccinia virus expression vector.

54. The method of claim 52 wherein the expression vector is a retrovirus expression vector.

55. The method of claim 52 wherein the expression vector is an adenovirus expression vector.

39 56. (Amended) The method of claim 52 further comprising selecting the cell from other cells because it expresses increased telomerase catalytic activity as a result of introducing the polynucleotide.

40 57. (Amended) The method of claim 52 wherein the cell is a human cell.

#### REMARKS

This paper is responsive to the non-final Office Action dated August 26, 2002, which is the second action on the merits of the application.

Claims 41-57 are pending in the application and under examination. Reconsideration and allowance of the application is respectfully requested.

#### Drawings:

Applicants are grateful to the Examiner for including a copy of the Draftsperson's Drawing Review with the Office Action. Formal drawings are being forwarded under separate cover.